CLAIMS

1. A deformable medical implant, comprising:

a body defining at least two anchor points, which body is adapted to be deformed so that the two anchor points are moved relative to each other;

at least two elongate extensions, each extension fixed to one anchor point;

a bridge coupling at least two of said extensions to each other; and

at least two hinges defined on at least one of said extensions, two of said at least two hinges having different preferred bending directions and being defined on one extension.

2. An implant according to claim 1, wherein said two elongate extensions each comprise a plurality of hinges.

3. An implant according to claim 2, wherein the hinges on said one elongate extension are a mirror of the hinges on the other, coupled, extension.

4. An implant according to claim 2, wherein the hinges on said one elongate extension have different axial locations than corresponding hinges a second, coupled, elongate extension.

5. An implant according to claim 2 or claim 4, wherein at least one of the hinges on said one elongate extension has a hinge bending direction different from corresponding hinges a second, coupled, elongate extension.

6. An implant according to any of claims 2, 4 or 5, wherein at least one of the hinges on said one elongate extension has a resistance to bending different from corresponding hinges a second, coupled, elongate extension.

7. An implant according to claim 1, wherein only one of said at least two elongate extensions comprises a plurality of hinges.

8. An implant according to any of claims 1-7, wherein at least two of said plurality of hinges have bending axes that are oblique to a device plane of said body, said device plane

being a substantially two-dimensional mathematical surface conforming to the general geometry of the device.

9. An implant according to any of claims 1-7, wherein at least one of said plurality of hinges has a preferred bending direction in a device plane of said body, said device plane being a substantially two-dimensional mathematical surface conforming to the general geometry of the device.

10. An implant according to claim 9, wherein at least one of said plurality of hinges has a preferred bending direction perpendicular to a device plane of said body, said device plane being a substantially two-dimensional mathematical surface conforming to the general geometry of the device.

11. An implant according to any of claims 1-10, wherein said hinges are arranged to cooperate with said bridge to bend said extensions in a direction including a component perpendicular to a device plane of said body, when said anchor points are moved apart, said device plane being a substantially two-dimensional mathematical surface conforming to the general geometry of the device.

12. An implant according to claim 11, wherein said hinges are arranged to bend at least one of said extensions at at least two points, in different directions.

13. An implant according to claim 11, wherein said hinges are arranged to bend said extensions at least 45 degrees away from said device plane.

14. An implant according to claim 11, wherein said hinges are arranged to bend said extensions at least 80 degrees away from said device plane.

15. An implant according to claim 11, wherein said hinges are arranged to bend said extensions at least 90 degrees away from said device plane.

16. An implant according to claim 11, wherein said hinges are arranged to bend said extensions at least 120 degrees away from said device plane.

17. An implant according to any of claims 1-16, wherein at least one of said hinges comprises cuts in said extension.

18. An implant according to any of claims 1-17, wherein at least one of said hinges comprises a weakening in a position along said extension.

19. An implant according to any of claims 1-18, wherein at least one of said hinges comprises a bore in said extension.

20. An implant according to any of claims 1-19, wherein said extensions extend axially away from said body, prior to moving apart of said anchor points.

21. An implant according to any of claims 1-19, wherein said extensions extend axially towards said body, prior to moving apart of said anchor points.

22. An implant according to any of claims 1-21, wherein said bridge is defined at an end of said extensions.

23. An implant according to any of claims 1-22, wherein said bridge is deformable.

24. An implant according to claim 23, wherein said bridge is more resistant to bending than said hinges.

25. An implant according to any of claims 1-24, wherein said hinges are plastically deformable.

26. An implant according to any of claims 1-25, wherein said plurality of hinges comprise at least three hinges on a single extension.

27. An implant according to any of claims 1-26, wherein said body is cylindrical.

28. An implant according to any of claims 1-27, wherein said implant is adapted for implanting in a blood vessel.

29. An implant according to claims 1-28, wherein said implant is a stent.

30. An implant according to claim 29, comprising a plurality of extensions such that said plurality of extensions define a flared section for said stent.

31. An implant according to claim 30, wherein said flaring is symmetric.

32. An implant according to claim 30, wherein said flaring has an axis that is at an angle to an axis of said stent.

33. An implant according to claim 30, wherein said flaring comprises a coupling between different extensions such that a flaring angle at one side of the flare compensate for a flare angle at another side of the flare.

34. An implant according to claim 30, wherein said flaring is defined on a side of said stent.

35. An implant according to claim 34, wherein said flaring has an axis generally perpendicular to an axis of said stent.

36. An implant according to claim 34, wherein said flaring is generally cylindrical.

37. An implant according to any of claims 30-36, wherein said stent is a mesh stent.

38. An implant according to claim 37, wherein said flared section is a mesh.

39. A method of distorting a medical implant structure having two extensions coupled at a point thereof, comprising:

changing the relative position of two points on said extensions that are distanced from said coupling point;

transforming, using a plurality of pre-defined hinges, tension forces applied by said changing into forces that bend said structure in a plane outside of a plane defined by said changing and by at least a planar portion of said extensions.

40. A method according to claim 39, wherein said structure is cylindrical.

41. A method according to claim 40, wherein said changing is applied by radially expanding said cylindrical structure.

42. A method according to claim 40 or claim 41, wherein transforming comprises flaring out said extension to more than 50 degrees relative to an axis of said cylinder.

43. A method according to claim 42, wherein said flaring includes a change in angle relative to said axis, along said extensions.

44. A method according to any of claims 39-43, wherein said medical implant is inside a body during said changing and transforming.

45. A method of implanting a stent, comprising:

conveying a stent to a bifurcation location;

extending at least one advance limiter which is not part of said stent;

advancing said stent until said advance limiter contacts a vessel of said bifurcation of other than a vessel in which said stent is to be implanted; and

expending said advanced stent.

46. A method according to claim 45, wherein extending comprises expanding a mechanical structure.

47. A method according to claim 45, wherein extending comprises inflating an inflatable structure.

48. A catheter including an advance limiter, comprising:

a catheter adapted to carry a stent thereon; and

an advance limiter configured to selectably extend in a general direction of an axis of said catheter, and away from said catheter.

49. A catheter according to claim 48, wherein said advance limiter is configured to extend in a direction of said stent and extend at least partly past a plane that is perpendicular to an axis of said stent.

50. A catheter according to claim 48 or claim 49, wherein said advance limiter comprises a balloon structure.

51. A catheter according to claim 48 or claim 49, wherein said advance limiter comprises a mechanically extending structure.

52. A catheter according to claim 51, wherein said advance limiter comprises a self-extending structure.

53. A catheter according to claim 51, wherein said advance limiter comprises a manually-extending structure.

54. A mesh stent comprising:

a cylindrical body adapted to be inserted in a body and stent a blood vessel; and

a mesh flared section adapted to flare out to more than 90 degrees without tearing of said mesh.

55. A stent according to claim 54, wherein said flared section comprises a plurality of radially expandable sections and wherein said radially expandable sections each includes a wire section with one or more bends and wherein a length of wire in said sections increases when going in a direction away from a center of said body.

56. A stent according to claim 55, wherein a number of said bends increases in said direction.

57. A stent according to any of claims 54-56, wherein said stent is cut from a sheet or tube.